

slip 10/05

Dart Aerospace Ltd.

Date: Friday, 04/04/2008 9:46:07 AM  
User: Julie Lecocq

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	AFT X-TUBE EXT HEIGHT(-013)
<b>Job Number</b> :	38358		
<b>Estimate Number</b> :	10563		
<b>P.O. Number</b> :		<b>Part Number</b> :	D205596107
<b>This Issue</b> :	04/04/2008	<b>Drawing Number</b> :	D205596107
<b>Prsht Rev.</b> :	NC	<b>Project Number</b> :	N/A
<b>First Issue</b> :	04/04/2008	<b>Drawing Revision</b> :	B
<b>Previous Run</b> :	38357	<b>Material</b> :	
<b>Written By</b> :		<b>Due Date</b> :	12/05/2008
<b>Checked &amp; Approved By</b> :	JLD 08.4.09	<b>Qty:</b>	1 Um: Each
<b>Comment</b> :	Est Rev:D 05.03.21 Added bending procedure KJ/JLM Est Rev:E 08-01-10 ECN 1075 DD		

### Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	DC	DOCUMENT CONTROL
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**Comment:** DOCUMENT CONTROL

Photocopy D205-594 bluefile & type labels per PPP D205-596-107 CHG002

2.0	D2890	Aft Crosstube
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty	Part number	Description	Batch
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1	D2890	Aft Crosstube	
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B38403

DP

8-7-23

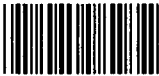
3.0	CROSSTUBES	CROSSTUBES RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

Mark 20.36" for cutting from tangential line in the straight section from D2890 as per Dwg wall template.

4.0	QC15	DIMENSIONAL CHECK OF X-TUBES
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**Comment:** DIMENSIONAL CHECK OF X-TUBES

70604230

5.0	CROSSTUBES	CROSSTUBES RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-107

DP 8-7-23

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and batch # on one end of tube.

AWM 8-7-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 04/04/2008 9:46:07 AM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 38358

Part Number: D205596107

Job Number:



Seq. #: Machine Or Operation: Description :

6.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/07/25 (X)

7.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Arm 8-2-23



Comment: HAND FINISHING RESOURCE #1

Touch up ends of the tube with Chemical Conversion Coat per QSI 005 4.1

8.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

S 08/07/25 (X)

9.0 SPRAY PAINTING SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside with Immron per QSI 005 4.2

ST 08-07-31

10.0 QC14 INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

ml 08 08 05

(1)

11.0 D3595063530 RUBBER CUSHION



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

RUBBER CUSHION

batch ~~39255~~ 39255

ml 08 08 06

12.0 MS2192028 Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

clamp(per MIL-DTL-8783C)

batch 108466

ml 08 08 06

13.0 D29401 Support



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number

2 D2940-1

Description

Support

Batch

39685

ml 08 08 06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 04/04/2008 9:46:07 AM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT(-013)

Job Number: 38358

Part Number: D205596107

Job Number:



Seq. #:

Machine Or Operation:

Description :

14.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

2- Apply magnobond 6398 as per dwg D205-596-107

Magnobond 6398 Batch: 107621

EXP: 08/2009 Time: 8:30am

3-Install supports and clamps per Dwg D205-596-107. Torque clamps to 80-100 in lb. as per dwg

ml 08 08 06 ①

ml 08 08 07 ①

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08 08 07 ①

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-107

Location: D

PPP Rev: D

08 08 07 ①

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08 08 08 ①

Job Completion



ml 08-08-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

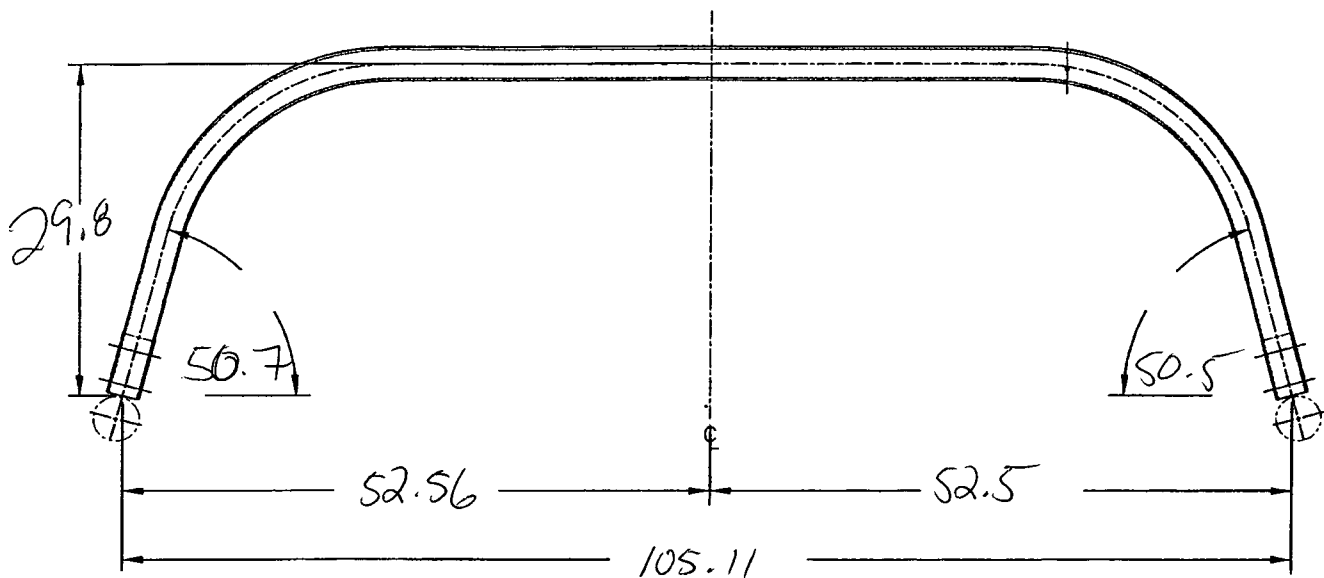
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	38358
<b>Description:</b> Crosstube High-High Aft		<b>Part Number:</b>	D205-596-107
<b>Inspection Dwg:</b> D205-596-107		<b>Rev:</b> A B / 06/01/07	<b>Page 1 of 1</b>

Required Dimension	Min	Max
Height	29.7	29.9
1/2 Span	52.4	52.6
Angle	49	52
Total Span	104.8	105.2



Comments

QC15 Inspection	
Date	08-07-23

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	

**PARTS LIST:**

Qty	Part Number	Description
X	D205-596-107	CROSSTUBE ASSEMBLY, HI-HI AFT
1	D6008-180	CROSSTUBE
2	D2940-1	SUPPORT
4	D3595-063-530	RUBBER CUSHION
4	MS21920-28	CLAMP
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

**GENERAL NOTES:**

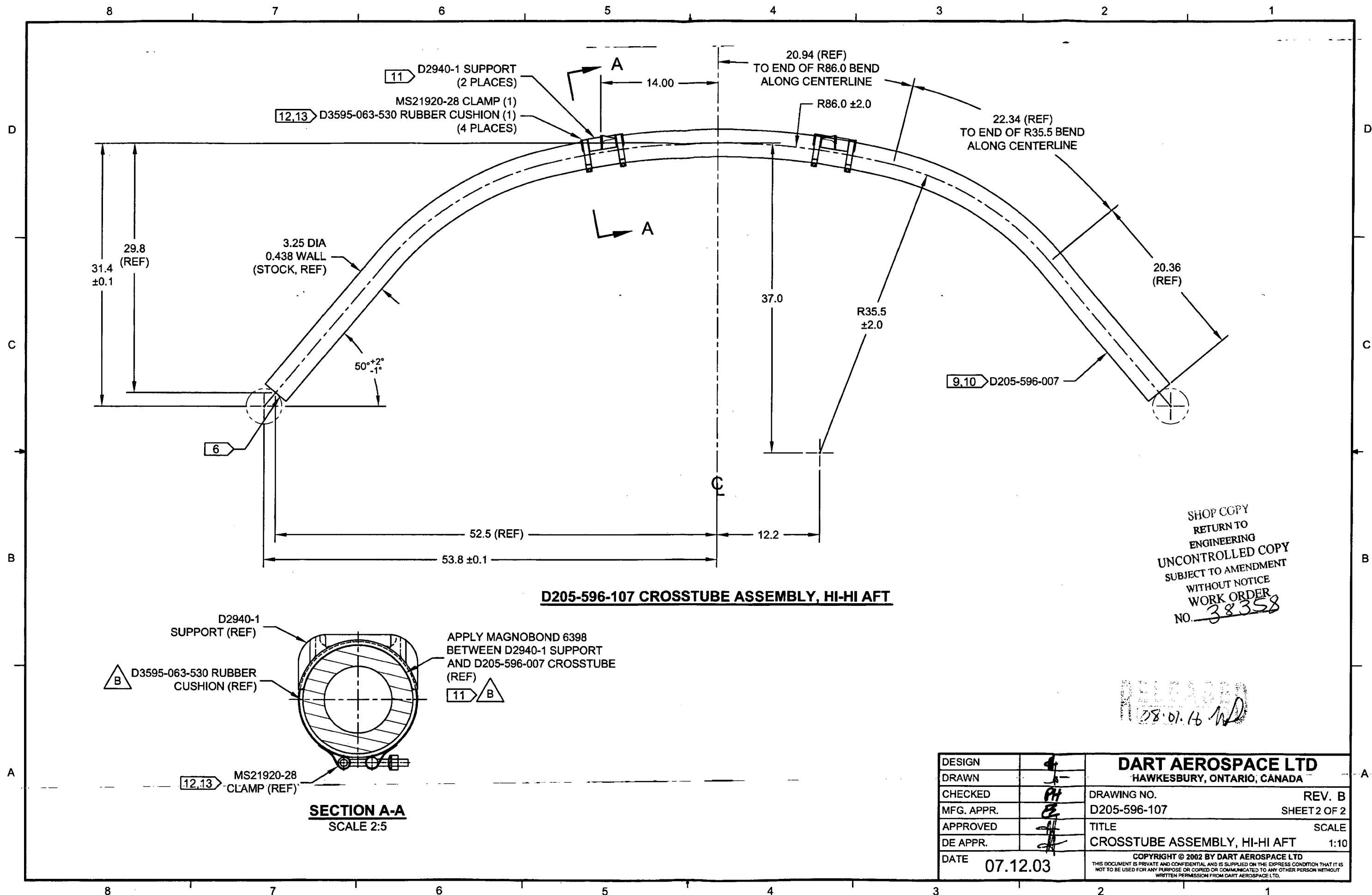
- 1) MATERIAL: MANUFACTURE FROM D6008-180  
FINISHED LENGTH =  $127.28 \pm 0.02$
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH  
VIBRATING STYLUS
- 7) WEIGHT: 50 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE
- 9) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO  
BENDING IS 6% BASED ON O.D.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT  
WILL BE IN CONTACT WITH THE CROSSTUBE. LET CURE FOR 12 HOURS AFTER INSTALLATION  
AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-28 CLAMPS WITH D3595-063-530 RUBBER CUSHIONS TO SECURE D2940-1  
SUPPORT ON THE TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE  
CROSSTUBE SUPPORT.  
**NOTE: IT IS ACCEPTABLE TO SUBSTITUTE MS21920-28 CLAMPS WITH LONGER OR SHORTER  
MS21920-XX CLAMPS TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF  
1.5 THREADS IN SAFETY ON THE NUTS.**
- 13) TORQUE CLAMPS 80 TO 100 IN-LB







08-01-16 W.P.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 38358

B	SUPPORT NOW MAGNOBONDED; REMOVE D2856-600-1009 ABRASION STRIP; UPDATED NOTES; ADDED D3595-063-530 CUSHION	MB	07.12.03
A	NEW ISSUE	DS	02.11.20
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>4</u>	<b>DART AEROSPACE LTD</b>	
DRAWN	<u>1</u>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<u>PH</u>	DRAWING NO.	REV. B
MFG. APPR.	<u>CE</u>	D205-596-107	SHEET 1 OF 2
APPROVED	<u>TH</u>	TITLE	SCALE
DE APPR.	<u>TH</u>	CROSSTUBE ASSEMBLY, HI-HI AFT	NTS
DATE	07.12.03	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	





DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D205-596-107	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE ASSEMBLY, HI-HI AFT	1:10
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Date: Friday, 04/04/2008 9:46:07 AM  
 User: Julie Lecocq

## Process Sheet

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<b>Customer</b>	: CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b>	: AFT X-TUBE EXT HEIGHT(-013)
<b>Job Number</b>	: 38358		
<b>Estimate Number</b>	: 10563		
<b>P.O. Number</b>	:	<b>Part Number</b>	: D205596107
<b>This Issue</b>	: 04/04/2008	<b>S.O. No.</b>	:
<b>Prsht Rev.</b>	: NC	<b>Drawing Number</b>	: D205596107
<b>First Issue</b>	: 04/04/2008	<b>Project Number</b>	: N/A
<b>Previous Run</b>	: 38357	<b>Drawing Revision</b>	: B
	<b>Type</b> : LANDING GEAR	<b>Material</b>	:
<b>Written By</b>	:	<b>Due Date</b>	: 12/05/2008
<b>Checked &amp; Approved By</b>	: <u>JLD 08.4.09</u>	<b>Qty:</b>	1 Um: Each
<b>Comment</b>	: Est Rev:D 05.03.21 Added bending procedure KJ/JLM Est Rev:E 08-01-10 ECN 1075 DD		

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	DC	DOCUMENT CONTROL
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Comment: DOCUMENT CONTROL

Photocopy D205-594 bluefile &amp; type labels per PPP D205-596-107 CHG002

JLD 08.4.14

2.0	D2890	Aft Crosstube
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2890 Aft Crosstube

3.0	CROSSTUBES	CROSSTUBES RESOURCE 1
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Comment: LANDING GEAR RESOURCE 1

Mark 20.36" for cutting from tangential line in the straight section from D2890 as per Dwg wall template.

4.0	QC15	DIMENSIONAL CHECK OF X-TUBES
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Comment: DIMENSIONAL CHECK OF X-TUBES

5.0	CROSSTUBES	CROSSTUBES RESOURCE 1
-----	------------	-----------------------



Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-107

2-Deburr &amp; Inspect for surface damage. Polish cut surface. Scribe part # and batch # on one end of tube.